Tetsuo KOYAMA*: **On the identity of *Smilax Blumei* A. DC.**

小山鐵夫*: *Smilax Blumei* とその類縁

Smilax Blumei, bearing very large thick leaf-blades up to 30 cm in length on coarse woody stems, is one of the largest species of green briers in tropical Asia, and, with its two allied species, makes up a small natural group of the genus, well marked by quite characteristic inflorescences. As illustrated in figures 1 to 3, the inflorescences of this group are large compound umbels always single at an axil of a leaf. Its primary peduncle is so much abbreviated that it is almost enclosed in the broad wings of the petiole sheath. On the contrary, the radially branched secondary peduncles are well elongated as if they were primary peduncles radially branched at the axil. Mr. James Sinclair, the Keeper of the Botanic Gardens, Singapore, was kind enough to turn over me all specimens of *Smilax* kept therein, and in the course of examining them, a need was felt to reinvestigate *Smilax Blumei* nomenclatorically. Mr. C. E. Hubbard of Kew Gardens, who sent me several photograghs of type specimens, and Professor H. Hara and Dr. J. Ohwi, who have given me various facilities to carry out this study, are gratefully acknowledged by the author.

The name *Smilax Blumei*, published by De Candolle in 1878 basing upon three specimens, has been accommodated to a green brier shown in figure 1, which is characterized by leaf-blades densely brown-tomentose beneath, as was explained by Hooker fil. (1892) as "......, leaves 8–24 in. orbicular-ovate acute or obtuse tomentose beneath stoutly 5—7-costate from above the base,......——Resembles *S. leucophylla*, but the leaves are tomentose and not glaucous beneath." Recently, however, it has come under my notice that the original description given by De Candolle himself does not agree with this hairy-leaved plant, nor has it been reported from the Javan islands. This disagreement has already been noticed by Koorders (1911) in his Exkursionsflora von Java as "...... Nach Hooker l. c. 313 sollen die Blätter unterseits "tomentose" sein, jedoch wird von C. DC. l. c. nicht erwähnt, daß die Blätter unterseits behaart sind und bei dem Buitenzorger Material von [*S. perfoliata* Bl. sind die Blätter auch nicht behaart.", so that he explained the name *S. Blumei* as being a synonym of *S. leucophylla*. As Hooker also suggested in the paragraph cited above, *S. Blumei* and *S. leucophylla* are very much akin, but the latter is easily distinguishable by its compound inflorescence on well elongated primary peduncle.

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Judging from the photographs of De Candolle's syntype specimens, the three plants cited by De Candolle under his original description, viz. Blume s. n., Maingay 1697, and Helfer 5450, are undoubtedly a mixture of two quite different species. One species represented by Maingay 1697, has a thick coriaceous leaf densely tomentose on the lower surface, and another, represented by Blume and Helfer 5450, have a relatively thin leaf quite glabrous on the lower surface. The former coincides with a plant of figure 1, and this is *Smilax Blumei* of Hooker fil. and of Ridley. But, De Candolle described it as "Limbi ample ovato-acuti. ......, subtus vix pallidiores, nervis 7 ......", classifying it as belonging to a group "1. Folia glabra." Further, he added as "Specimina h. kew. descripsi, quae cum h. lugd. bat. collegi." From these evidences, De Candolle's description surely falls into the category of Helfer 5450 or Blume s. n. but not of Maingay 1697.

Since the name *Smilax Blumei* A. DC. was originally given to a Javan plant which was misidentified by Blume as *Smilax perfoliata* Lour. in his Enumeratio Plantarum Javae (1830), it is adequate that a sheet, Blume s. n., is hereby chosen for the lectotype specimen of *Smilax Blumei* A. DC. In this case, a new name is needed for the tomentose-leaved plant represented by Mainhay 1697, and in this paper I propose a new name, *Smilax Sinclairi*, for it in honour of Mr. Sinclair. *Smilax Blumei* in my sense comes closest to *Smilax Kingii*, from which it is easily separable by the thinner blades, verruculose stems, and far smaller berries. The following are key and descriptions for three similar species.

1) Leaf-blades densely tomentose beneath. .... *S. Sinclairi*, n. sp.
1) Leaf-blades glabrous.
    2) Leaf-baldes thin coriaceous, mostly 3 to 5-costate, cordate at the base; branches aculeate but smooth. .... *S. Blumei* A. DC.
    2) Leaf-blades very thick coriaceous, rounded at the base, (5-)—7-costate; branches aculeate and densely verruculose................*S. Kingii* Hook. f.

Smilax Sinclairi T. Koyama, spec. nova——Fig. 1.

Sm. Blumei A. DC., Monogr. Phanerog. **1**: 202 (1878), ex pte.! quoad. specim. Maingay 1697—Hook. fil., Fl. Brit. Ind. **6**: 312 (1892)—Ridley, Mater. Fl. Malay Pen. pt. 2, 107 (1907), et Fl. Malay Pen. **4**: 343 (1921).

Species foliis ample ovato-ovalibus subtus dense fulvotomentosis satis distincta.

Liana ramis ramulisque validis teretibus subsparsim aculeatis, internodiis circiter 15 cm longis. Folia grandia; limbi ovato-ovales usque ovato-orbiculares basi fere truncato-rotundi vel leviter emarginati apice subabrupte contracti et breviter acuti, 18–30 cm longi 20–23 cm lati maturitate crasse coriacei supra nitiduli subtus dense fulvo-fusco-tomentosi, nervis principalibus longitudinalibus vulgo 7 omnino supra basin separatis cum nervulis secundariis transversalibus grosse reticulatis; petioli 4 ad 6 cm longi obtuse subtrigoni laeves curvi basi cum alis ovato-acutis circiter 5 mm latis vaginam petioli 1.5–2 cm longam formantes; claviculae cum 1/3 folii

Hsu. K.

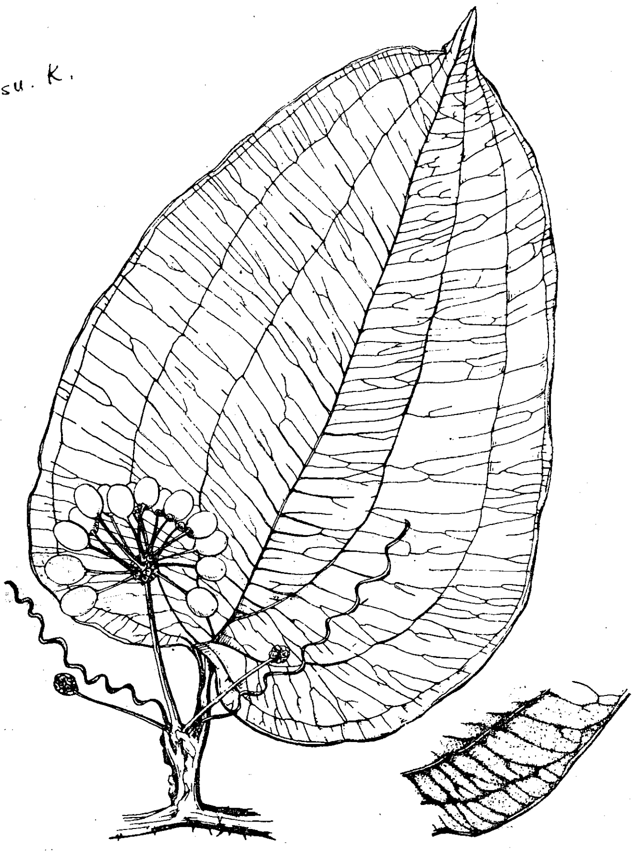

Fig. 1. *Smilax Sinclairi* T. Koyama, n. sp. A leaf with its inflorescence, and a part of the lower surface of a leaf × c. 1/4. (Drawn from Md. Shah, n. 89. Ic. orig)

aequilongae. Inflorescentia umbelliformis composita; pedunculus perbrevis sed crassiusculus usque ad 2 cm longus intra vagina petioli sui fere omnino absconditus; rami 3 radiati validi laeves ex axila squamae basilaris rotundae enati; receptaculi globosi 0.7–1 cm in diametro; pedicelli floris foeminei circiter 50 ad 3 cm longi. Baccae ample globosae 1.5 cm in diametro sordide fusco-purpureae maturitate glaucae. Flores ignoti.

Holotype: Malaya, A. C. Maingay 1697, K; photype in auct. herb. !

Specimens examined: Malaya (A.C. Maingay 1697, K); Malay Peninsula, Johore, Sungei Kayu, Jemaluang Rd. (Holttum 38405, SING); Perak (Ridley, SING); Negri Sembilan, Nilai Jindaram Estate, 300 ft. (Md. Shah 89, SING).

Distrib. Endemic in Malaysia.

Smilax Blumei A. DC., Monogr. Phanerog. **1**: 202 (1878), excl. specim. Maingay 1697; emend. T. Koyama——Fig. 2.

'*Sm. perfoliata* Loureiro': Blume, Enum. Pl. Javae 18 (1830).

'*Sm. leucophylla* Blume': Koorders, Exkursionsfl. Java **1**: 298 (1911), quoad syn. Sm. Blumei.

Branches very stout, terete, smooth but striate and loosely aculeate, internodes 10 to 12 cm long. Leaves large; blades ovate-oval, relatively thin coriaceous, 15–25 cm long, 8–17 cm broad, wholly glabrous, lighter-coloured beneath, rounded truncate-emarginate or shallowly cordate at base, suddenly contracted aboue to shortly acute apex, principal longitudinal nerves usually 5 rarely 7, elevated on lower surface, secondary nervules slender subdensely reticulate; petioles 4 to 7 cm long, obtusely trigonous, bented, petiole sheaths 2.5 to 3.5 cm lyng with ovate-acute wings about 7 mm in width; tendrils well elongate to 1/3 to 2/3 length of leaf-blade. Inflorescence of a compound umbel; primary peduncle very short but stout, 1 to 3 cm long, almost wholly enclosed in petiole sheath, branches 2 to 4, verticillate, rectangularly divergent, up to 10 cm long, with round-deltoid scale about 6 mm long at base; staminate umbels many-flowered, about 4 cm across in anthesis; pedicels slender 17 mm long. Staminate flowers: perianth about 1 cm long, its outer segments broadly oblong, 1.5 mm wide, round-tipped, recurved to reflexed in anthesis, inner segments linear, 1/3 mm wide, round-tipped; stamens 6, filaments slender, 0.8 mm long, anthers 1.5 mm long, vestigial pistil none. Pistillate umbels 20–40-flowered; receptacles globose, 6–8 mm in diametre; pedicels up to 2.5 cm long, wiry. Berries almost 1 cm across, probably dark purple when mature. Pistillate flowers unknown.

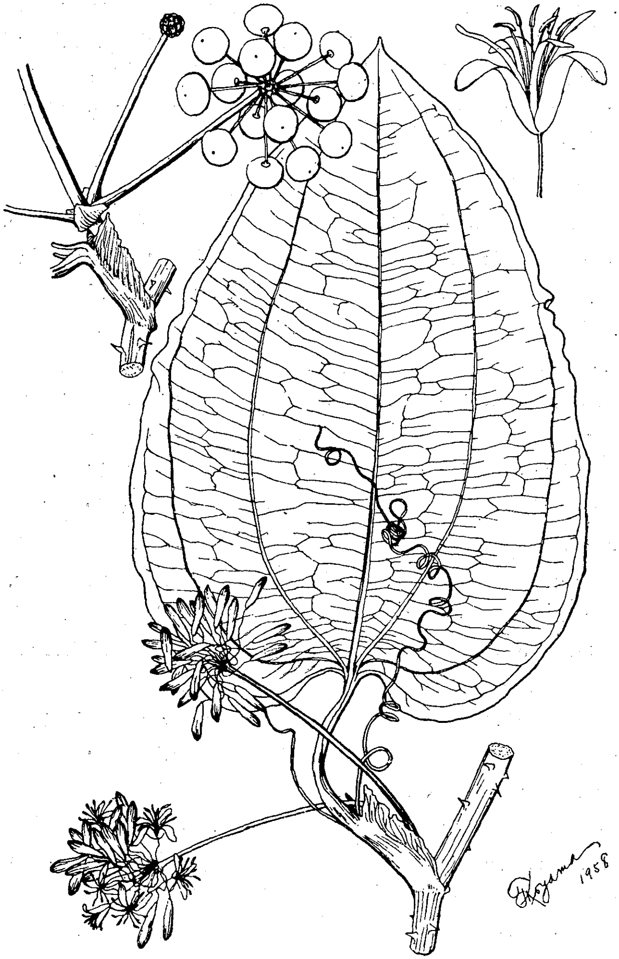

Fig. 2. *Smilax Blumei* A. DC. emend. T. Koyama. Leaf and inflorescecces, × c. 1/4; a staminate flower, × c. 1. (Drawn from Dalman 27294 and Strugnell 27295. Ic. origin.)

Lectotype: Java, C. L. Blume, BO; phototype in auct. herb.!

Specimens examined: Malay Peninsula: Pahang; Mlu Telom (H. C. Dalman 27294, SING): Pahang, Cameron Highlands (A. H. Balten Pooll, SING); Selangor, Bukit Etam (Kelsall 1792, SING); S. Telom, 3450 ft. (Strugnell 23925, SING)——Burma: Tenasserim and Andamans (Helfer 5450, K).

Distrib. Andaman, Malaya, Java.

Smilax Kingii Hooker, fil., Fl. Brit. Ind. **6**: 307 (1892)——Ridley, Mater. Fl. Malay Pen. pt. 2, 107 (1907), et Fl. Malay Pen. **4**: 343 (1921)——Fig. 3.

Stems very stout, terete, 6 to 15 mm across, densely verruculose and coarsely prickly with compressed-conical aculeae about 2cm long; internodes 5 to 15 cm long. Leaves large; blades ovate to ovate-oval sometimes almost orbicular, 20 to 30 cm long, 13 to 20 cm broad, very thick coriaceous, quite glabrous on both surfaces, base truncate-cuneate to rounded, gradually attenuate above to shortly acute apex or upper margin rounded-contracted with very short acute tip, longitudinal veins 5 to 7, separating from the blade-base, prominently elevated on lower susface, rather obscure on upper surface, transverse nervules oblique, very slender; petioles 4 to 7 cm long, smooth, 3-angled, petiole sheath 2 to 2.5 cm long with a pair of broad coriaceous wings about 1.5 cm broad; tendrils about 1/3 as long as leaf or much reduced. Pistillate inflorescence of a single compound umbel at axil of leaf; primary peduncle short but robust, almost wholly

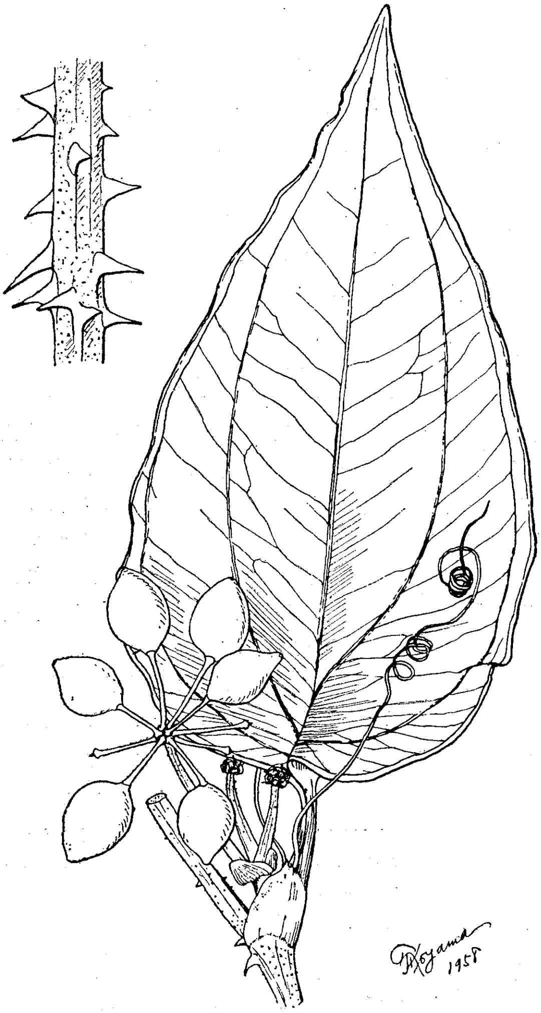

Fig. 3. *Smilax Kingii* Hooker, fil. A leaf with its inflorescence, and a part of a branch, × c. 1/4. (Drawn from L. Wray, Jr. s. n. Ic. origin.)

enclosed in petiole sheath, 1.5 to 2.5 cm long; branches 2 to 4, verticillate, stout, smooth or loosely verruculose, rectangularly divergent, 4 to 5 cm in length, bract scale ovate-oval, obtuse-tipped, about 7 mm long. Receptacles depressed-globse, 7 mm across, about 25-flowered; pedicels 2 to 2.5 cm long, wiry. Berries ovoid-globose, 2.5 cm long, 2 cm across, probably dark purple-blue when mature. Staminate flower not seen.

Holotype: Malay Peninsula, Perak. Dr. King's Collector, K; isotype in SING!

Specimens examined: Malay Peninsula: Perak, Taiping Hill 800 ft. (M. R. Henderson 10008, SING); Ditto (Ridley 11403, SING); Waterfall Hill (L. Wray 2063, SING).

Distrib. Endemic in Malaya.

私は昨年インドシナのサルトリイバラ属を研究して以来，東南アジアの本属植物に非常に興味を感じていた処，その直後シンガポール植物園長のシンクレア氏が同園腊葉庫所蔵のサルトリイバラ類約500点を貸与された。それらを研究の結果インドシナ・マレーシア・台湾の種類についての新事実が種々判明しつゝある。以後これらをグループごとにまとめて発表したいと考えているが，本属では日本のサルトリイバラに見る様に葉の形が非常に変り易い上，記載もしにくいため，最終的な結果に漕ぎつけるためには英国キュー植物園から相当数のタイプ等標本の写真の贈与を受けねばならなかった。又，今夏米国の主要腊葉庫を訪ねて中国の標本を閲覧して正確を期す可く努めた。今回扱つたものはマレーの *S. Blumei* を主体とするグループで，図示した様な巨大な葉と特異な花序は日本では想像に難いものであろう。

○故柳田由蔵氏の森林樹木の稚苗図説について（久内清孝） Kiyotaka HISAUCHI; On the reprint and their pagination of Shinrin-Jumoku-Chibyo-Zusetsu or illustrations of Seedlings of Japanese Forest trees by Yoshizo Yanagita.

いろいろ必要があつて，この文献をしらべたので，ここに記しておく。これは，柳田氏が，多年にわたつて実際に発芽させたものの見とり図をとり，かつ記述したもので，林学会賞を得た仕事で，林学会雑誌 9 巻 (1927)—25 巻 (1943) に連載されたもので，605 種を扱つてあり，25 巻には総索引がつけてある。柳田氏は別刷を五編つくつているが，24 巻にのせた分は別刷が配布されなかつた。また 25 巻の総索引も同様である。それ故流布されている別刷は 5 冊で 649 種（図説された種には通し番号がつけてある）までで，林学会雑誌 24 巻 (1942) 分，すなわち 589 号から 605 号までは除外されている。これらはおもに熱帯性のものである，これは当時そういうものが入手できた事情によるものと考えられる。尚 25 巻掲載の総索引ももちろん除外されている。それから，別刷表紙に印刷されている林学会誌の巻数号数には誤植があり，また各頁の頁数はその篇独特のもので林学雑誌の原文の丁づけとは無関係のものである。